ENGINEERING AND RELATED SERVICES
AUGUST 6, 2010

STATE PROJECT NO. 700-99-0542
RETAINER CONTRACT FOR
SIGNAL TIMING STUDIES
DISTRICTS 03, 04, 05, 07, 08 & 58

Under Authority granted by Title 48 of Louisiana Revised Statutes, the Louisiana Department of Transportation and Development (DOTD) hereby issues a Request for Qualification Statements (RFQ) on Standard Form 24-102 (SF 24-102), "Professional Engineering and Related Services", revised January 2003, from Consulting Firms (Consultant) to provide engineering and related services. **All requirements of Louisiana Professional Engineering and Land Surveying (LAPELS) Board must be met at the time of submittal.** One Prime-Consultant/Sub-Consultant(s) (Consultant/Team) will be selected for this Contract.

Project Manager – Ms. Tanya Bankston

All inquiries concerning this advertisement should be sent in writing to Debbie.Guest@LA.gov.

PROJECT DESCRIPTION

The selected Consultant will perform engineering and related services for projects covered by a Retainer Contract under separate Task Orders. The Consultant will be required to execute a Task Order which will specify the scope of services, contract time, and compensation. Each Task Order will become a part of the Retainer Contract.

SCOPE OF SERVICES

The services for Task Orders rendered under this Retainer Contract may consist of the following:

TASK 1.0 PROJECT MANAGEMENT

A. Initial Meeting

1) A meeting with the Department and the Consultant will be held at the beginning of each corridor study. The purpose of this meeting is to establish procedures, deliverables, and schedules. Information, where applicable such as TSIs (Traffic Signal Inventories), construction plans, as-built plans, traffic counts and signalization program sheets and etc. will be provided and/or requested at this meeting. If crash reports will be needed, directions on where to retrieve the reports and how to present them will be given. The Consultant will prepare the minutes of the meeting for review by the attendees.

B. Other Meetings

1) The Consultant will attend meetings requested by the DTOE (District Traffic Operations Engineer) and/or Project Manger during certain stages of the project.

C. Written Plan

1) A written plan describing the signals to study, the work being performed at each intersection, and a timeline to perform the needed work will be provided by the Consultant. The Consultant will submit the written plan to the Project Manager and DTOE for review.

D. Monthly Reports

1) Monthly progress reports will be prepared by the Consultant to ensure that the project schedule is being kept. The report shall include a progress chart indicating percent of time elapsed and percent of work completed. The report shall include changes in project schedule. The report may include a discussion of the previous month's progress, problems that were encountered, unresolved issues, and anticipated work for the next month.

Deliverables:

a) The Consultant will attend the project initiation meeting and other meetings as requested by the DTOE and/or the Project Manager.
b) Minutes of the meeting will be provided by the Consultant for review by attendees.
c) A written plan describing the signals to study, the work being performed at each intersection, and a timeline to perform the needed work will be provided by the Consultant.
d) A monthly progress report shall be submitted by the Consultant to ensure that the project schedule is being kept.

TASK 2.0 INITIAL DATA COLLECTION

A. 7-day, 24-hour Counts

1) A 7-day, 24-hour traffic volume count session shall be conducted on all the approaches to the intersection and the data collected in 15 minute intervals.
2) A 7-day, 24-hour vehicle classification monitoring session shall be conducted in both directions on the highest volume approach to the intersection and collected in 15 minute intervals.

B. Inventory

1) Gathering of Data/TSIs - The Consultant will verify the TSIs provided by DOTD Section 77 are the most current TSIs available by comparing these TSIs to TSIs located at each respective District Traffic Operation's office. The Consultant will use the most current TSIs while performing these inventories.
2) Intersection Inventories - The Consultant will perform a field inspection at each intersection. The Consultant will complete inventory forms provided by DOTD for each intersection. The inventory forms will document the following information.

Inventory Forms

a. TSI number
b. GPS coordinates (Latitude and Longitude)
c. Signal type
d. Pedestrian crossing information
e. Interconnect type
f. Communication type
g. Cabinet mount type
h. Cabinet type
i. Controller type
j. Conflict monitor type
k. Pole configuration
l. Pole types
m. Detection information
n. Signal head information
o. Street names (State Route numbers / Name)
p. North arrow
q. Signal layout (Poles, Cabinet, Heads)
r. Signal head numbers (based on TSI)
s. Lane numbers
t. Lane assignments (left / through / right / etc.)
u. Lane widths
v. Turn lane storage lengths
w. Median widths
x. Shoulder widths
y. Pavement markings

C. Crash Analysis

1) Summary of crash reports and/or
2) Crash collision diagram.

D. Speed Study

1) The Consultant shall use 100 vehicles to calculate the 85^{th} percentile, 50^{th} percentile, and 10 mile per hour pace speed as determined by EDSM VI.1.1.1 (Warrants for the Establishment of Speed Zones).
2) A map indicating the existing speed limit, the study location, and a 85^{th} / 50^{th} percentile location identifier.
3) A motor vehicle speed study tabulation form and a spot speed study cumulative frequency curve form showing the speed of the vehicles measured. The spot speed study cumulative frequency curve form also should show the 85^{th} and 50^{th} percentile speeds along with the 10 mile per hour pace.

E. Warrant Analysis

1) The Consultant shall conduct a warrant analysis for all intersections.

F. Follow-up Meeting

1) The Consultant will schedule a meeting with the DTOE and the Project Manager to discuss the information gathered at this stage of the project.

Deliverables:

a) 7-day, 24-hour traffic volume counts in 15 minute intervals shall be provided in an approved electronic format.
b) A 7-day, 24-hour vehicle classification monitoring session collected in 15 minute intervals shall be provided in an approved electronic format. (if requested)
c) The finding of the intersection inventories in pdf format.
d) Intersection sketch shall be provided in Microstation format. A blank TSI form will be provided in Microstation format by DOTD. The Consultant shall complete the "SKETCH OF INTERSECTION" portion of the TSI form. The intersection sketch shall include the following information.
    - TSI #
    - Street names (State route #s/Name)
    - North arrow
    - Signal Layout (poles, cabinet, heads)
    - Signal head numbers (based on TSI)
    - Lane Numbers
    - Lane assignments (left/through/right/etc.)
    - Lane widths
    - Turn lane storage lengths
    - Median widths
    - Shoulder widths

- Pavement markings

e) Inventory sheet in pdf format
f) Crash summary and/or crash collision diagram (if required)
g) A map indicating the existing speed limit, the study location, and a 85^{th} / 50^{th} percentile location identifier in pdf format. An example will be provided by DOTD.
h) A motor vehicle speed study tabulation form and a spot speed study cumulative frequency curve form showing the speed of the vehicles measured in pdf and Excel format. The spot speed study cumulative frequency curve form also should show the 85^{th} and 50^{th} percentile speeds along with the 10 mile per hour pace.
i) Warrant analysis (no conclusions or recommendations)
j) Location map of upstream and downstream signals in feet.
k) Peak periods to determine when manual counts and observations should be performed. The peak periods will be approved during the Follow-up meeting.
l) The Consultant (the Principal and the team working on the project) will attend the Follow-up meeting and minutes of the meeting will be provided by the Consultant for review by attendees.

TASK 3.0 FINAL DATA COLLECTION

A. Turning Movement Counts

1) Turning movement count sessions shall cover both the morning and the evening peak hours such that each session includes a 45 minute period minimum either side of the anticipated peak hour. All turning movement counts for an intersection shall take place on the same day.
2) The peak am, peak pm, and peak lunch (if applicable) turning movement count sessions shall be conducted during the work week on Tuesday, Wednesday and/or Thursday. They shall not be conducted during holiday or other abnormal traffic conditions. Also, if school traffic factors into the count data then the counts must take place when school is in session.
3) During each 15 minute period of the turning movement count the queue shall be estimated in feet. The queue is a line of vehicles, bicycles, or persons waiting to be served by a phase in which the flow rate from the front of the queue determines the average speed within the queue. Slowly moving vehicles or people joining the rear of the queue are usually considered part of the queue. The internal queue dynamics can involve starts and stops. A faster-moving line of vehicles is often referred to as a moving queue or a platoon.
4) Depending upon the 7-day, 24 hour count a third or fourth peak hour may need to be counted and these could be on any day other than Tuesday, Wednesday, and Thursday. This will be determined at the Task 2.0 Follow-up meeting.
5) The data shall be collected in 15 minute intervals.
6) The turning movement count data shall include pedestrians. (if applicable)

7) The turning movement count data shall separate passenger vehicles, school buses and commercial vehicles. (if applicable)

B. Peak Hour Observations

1) Peak Hour Observations. (To be performed by the engineer conducting the study. Each peak hour shall be observed to note queue lengths, congestion (if any), existing operational issues, sight distance, etc)

C. Travel Times

1) Travel time study to be performed as defined in the Highway Capacity Manual.

D. Signal Analysis

1) The approved software for the signal studies is the current Synchro Version by Trafficware.

E. Follow-up Meeting

1) The Consultant will schedule a meeting with the DTOE and the Project Manager to discuss the information gathered at this stage of the project.

Deliverables:

a) An electronic copy of all of the count data shall be submitted in Excel format.
b) The manual count diagrams showing all vehicle movements entering the intersection and their direction in 15-minute intervals. The traffic shall be separated into passenger vehicles, school buses, pedestrians, and commercial vehicles. (if applicable)
c) The summary of the manual counts for all vehicle movements in 15 minute intervals which include the peak hour factor and a diagram of the sum of the peak hour traffic along with the turning movements and the queue lengths (ft).
d) Clearance interval worksheet showing inputs and results.
e) Summary of Peak Hour Observations in pdf format
f) Travel time study in pdf format
g) CD with
    - Electronic files from software analysis;
    - All Deliverables in pdf and Excel format.
e) Final study document, including the following information presented in table/chart format (in this order):
    - Inputs (if software was used for the analysis);
    - Clearly defined and justified assumptions;

- Software defaults value modifications and justification for each;
- Proposed signal cycle lengths and timing schemes;
- Progression chart illustrating the green band;
- Calibration (Travel time study)

f) The Consultant (the Principal and the team working on the project) will attend the Follow-up meeting and minutes of the meeting will be provided by the Consultant for review by attendees.

TASK 4.0 NEW PROPOSED TSIs

A. Proposed TSIs

1) A proposed TSI with all proposed timings as approved in Task 3.0 shall be submitted.

B. Follow-up Meeting (if applicable)

1) The Consultant will schedule a meeting with the DTOE and the Project Manager to discuss the proposed TSIs.

Deliverables:

a) Current timing parameters shall be submitted on CD in TSI format.
b) Completed TSI forms shall be submitted in Excel, Microstation, and hardcopy format.
c) The Consultant (the Principal and the team working on the project) will attend the Follow-up meeting and minutes of the meeting will be provided by the Consultant for review by attendees.

TASK 5.0 PROGRAMMING CONTROLLERS

A. Programming Controllers

1) Consultant Programs - The Consultant will program the timings into the controllers once the timings have been approved by DOTD, Section 77 (Traffic Engineering Management Section). The Consultant will have to monitor timings during peak and off peak hours. The Consultant will be expected to ensure the timings are operating at maximum efficiency. The Consultant will be expected to run an after travel time study to illustrate the timings are operating according to the analysis program. A DOTD employee assigned by the DTOE will be present at all times when the Consultant is programming the controllers.
2) District Programs - The Consultant will have to monitor timings during peak and off peak hours. The Consultant will be expected to ensure the timings are operating at maximum efficiency. The Consultant will be expected to run an after travel time study to illustrate the timings are operating according to the analysis

program. If the timings are not operating as designed, a new timing will be designed and TSIs will be submitted. The District will contact the Consultant within 2 weeks of programming the controllers to perform the travel time study.

B. Follow-up Meeting

1) The Consultant will schedule a meeting with the DTOE and the Project Manager to discuss the programming of the controllers.

Deliverables:

a) The Consultant will program the controllers.
b) The Consultant will provide an after travel time study in pdf format.
c) An updated TSI if timings were altered.
d) The Consultant (the Principal and the team working on the project) will attend the Follow-up meeting and minutes of the meeting will be provided by the Consultant for review by attendees.

TASK 6.0 RECOMMENDATIONS

A. Geometric Improvements

1) The Consultant will make recommendations for improving the geometrics of an intersection where needed.

B. Striping Changes / Lane Configurations

1) The Consultant will make recommendations for making changes to the striping / lane configurations of an intersection where needed.

C. Equipment Upgrade

1) The Consultant will provide equipment upgrade options and/or recommend equipment upgrade options.

D. Follow-up Meeting

1) The Consultant will schedule a meeting with the DTOE and the Project Manager to discuss the programming of the controllers.

Deliverables:

a) The Consultant shall make recommendations in a report format, hardcopy and pdf, for geometric, striping / lane configuration, and

equipment upgrade improvements where needed along the project corridor.

b) The Consultant (the Principal and the team working on the project) will attend the Follow-up meeting and minutes of the meeting will be provided by the Consultant for review by attendees.

ITEMS TO BE PROVIDED BY DOTD

DOTD may provide copies of or access to TSIs, maps, surveys, plans, right-of –way information and/or any other pertinent information if available. It shall be the responsibility of the Consultant to review these documents and collect any required information at the applicable DOTD office. Items to be obtained from DOTD may include, but is not limited to the following:

- Existing highway plans (As-Builts)
- Previous studies or reports
- Crash data
- Existing TSIs
- Existing traffic counts
- Signalization program sheets
- Blank TSI form
- Examples of deliverables format

REFERENCES

All services and documents will meet the standard requirements as to format and content of the DOTD; and will be prepared in accordance with the latest applicable editions, supplements and revisions of the following:

1. AASHTO Standards, ASTM Standards or DOTD Test Procedures
2. DOTD Location and Survey Manual
3. DOTD Roadway Design Procedures and Details
4. DOTD Hydraulics Manual
5. DOTD Standard Specifications for Roads and Bridges
6. Manual of Uniform Traffic Control Devices
7. DOTD Traffic Signal Design Manual
8. National Environmental Policy Act (NEPA)
9. National Electric Safety Code
10. National Electric Code (NFPA 70)
11. DOTD Environmental Impact Procedures (Vols. I-III)
12. Policy on Geometric Design of Highways and Streets
13. Construction Contract Administration Manual
14. Materials Sampling Manual
15. DOTD Bridge Design Manual
16. Consultant Contract Services Manual
17. Geotechnical Engineering Services Document

18. Bridge Inspectors Reference Manual
19. DOTD Stage 1 Manual of Standard Practice

COMPENSATION

Compensation to the Consultant for services rendered in connection with each TO shall be based on negotiated work-hours using DOTD established billable rates for the actual work performed on the Task Order.

The amount payable under this Retainer Contract for services to be performed under the various TO's shall not exceed a maximum of **$1,500,000**. Each TO shall be payable under the respective TO project number which shall be obtained by the Project Manager.

All travel related expenses will be compensated under direct expenses, and will be in accordance with Louisiana Office of State Travel regulations found at: http://www.doa.louisiana.gov/osp/travel/travelpolicy/travelguide09-10.pdf. Vehicle rental rates will require prior approval from the DOTD Project Manager.

CONTRACT TIME AND NOTICE TO PROCEED

This Retainer Contract shall be in effect for the duration of **three years**. The services to be performed for each Task Order (TO) will be determined prior to the execution of the TO. The Consultant will proceed with the services required in the TO upon issuance of the Notice to Proceed from the DOTD. The contract time for each TO, will be specified in the executed TO. Any TO in effect, prior to the expiration date of the Retainer Contract shall be completed.

QUALITY CONTROL/QUALITY ASSURANCE

The DOTD requires the Consultant to develop a Quality Control/Quality Assurance program; in order to provide a mechanism by which all contracted services can be subject to a systematic and consistent review. Consultants must ensure quality and adhere to established design policies, procedures, standards, and guidelines in the preparation and review of all design products. The DOTD shall provide limited input and technical assistance to the Consultant.

MINIMUM PERSONNEL REQUIREMENTS

The following requirements must be met at the time of submittal (contract execution for federal jobs):

1. At least one Principal of the Prime-Consultant must be a Professional Engineer registered in the State of Louisiana.
2. At least one Principle or a responsible member of the Prime-Consultant must be a Professional Engineer registered in the State of Louisiana with a (PTOE) Professional Traffic Operations Engineer certification.

3. The Prime-Consultant must employ on a full time basis, a minimum of two Professional Engineers, registered in the State of Louisiana, with a PTOE certification, with at least five years of traffic analysis experience with signal warrants and signal timing, and a corresponding support staff.
4. The Prime-Consultant must also employ on a full-time basis or through the use of a Sub-Consultant a responsible member with a minimum of five years experience in traffic counting and speed data collection.
5. The Prime Consultant must also employ on a full-time basis or through the use of a Sub-Consultant, Professional Engineers responsible for programming traffic signal controllers. The Engineer Course offered by Naztec Solutions will be required at the time of contract execution. The personnel required to have this course are the Professional Engineers who will be responsible for programming the traffic signal controllers.

Certifications of Compliance (PTOE) must be submitted with and made part of the Consultants Standard Form 24-102 for all Personnel Requirements listed herein.

EVALUATION CRITERIA

The general criteria to be used by DOTD (when applicable) in evaluating responses for the selection of a Consultant to perform these services are:

1. Consultant's firm experience on similar projects, weighting factor of 3;
2. Consultant's personnel experience on similar projects, weighting factor of 4;
3. Consultant's firm size as related to the estimated project cost, weighting factor of 3;
4. Consultant's past performance on similar DOTD projects, weighting factor of 6;**
5. Consultant's current work load, weighting factor of 5;
6. Location will be based from a site centrally located in Districts 61, 62 & 02, weighting factor of 4.

** The TR (Traffic Analysis and Design) performance rating will be used for this project.

Complexity level (**moderate**)

Consultants will be evaluated as indicated in Items 1- 6. The evaluation will be by means of a point-based rating system. Each of the above criteria will receive a rating on a scale of 0-4. Then the rating will be multiplied by the corresponding weighting factor. The firm's ratings in each category will then be added to arrive at the Consultant's final rating.

If Sub-Consultants are used, each member of the Consultant/Team will be evaluated on their part of the contract, proportional to the amount of their work. The individual team member ratings will then be added to arrive at the Consultant/Team rating.

COMMUNICATION PROTOCOL

DOTD's Project Evaluation Team will be responsible for performing the above described evaluation, and will present a short-list of the three (if three are qualified) highest rated Consultants to the Secretary of the DOTD. The Secretary will make the final selection.

Below are the proposed Team members. DOTD may substitute for any reason provided the members meet the requirements of R.S. 48:291.

1. Debbie Guest – Ex officio
2. Tanya Bankston – Project Manager
3. Peter Allain
4. Jody Colvin
5. David Backstedt
6. John Eason

Rules of Contact (Title 48 Engineering and Related Services)

These rules are designed to promote a fair, unbiased, legally defensible selection process. The LA DOTD is the single source of information regarding the Contract selection. The following rules of contact will apply during the Contract selection process and will commence on the date of advertisement and cease at the contract execution by the selected firm. Contact includes face-to-face, telephone, facsimile, Electronic-mail (E-mail), or formal written communications. **Any contact determined to be improper, at the sole discretion of the LA DOTD, may result in the rejection of the submittal (SF 24-102):**

A. The Consultant shall correspond with the LA DOTD regarding this advertisement only through the LA DOTD Consultant Contracts Services Administrator;

B. The Consultant, nor any other party on behalf of the Consultant, shall not contact any LA DOTD employees, including but not limited to, department heads; members of the evaluation teams; and any official who may participate in the decision to award the contract resulting from this advertisement except through the process identified above. Contact between Consultant organizations and LA DOTD employees is allowed during LA DOTD sponsored one-on-one meetings;

C. Any communication determined to be improper, at the sole discretion of the LA DOTD, may result in the rejection of submittal, at the sole discretion of the LA DOTD;

D. Any official information regarding the project will be disseminated from the LA DOTD'S designated representative on the LA DOTD website. Any official correspondence will be in writing;

E. The LA DOTD will not be responsible for any verbal exchange or any other information or exchange that occurs outside the official process specified herein.

By submission of a response to this RFQ, the Consultant agrees to the communication protocol herein.

CONTRACT REQUIREMENTS

The selected Consultant will be required to execute the contract within 10 days after receipt of the contract.

INSURANCE - During the term of this contract, the Consultant will carry professional liability insurance in the amount of $1,000,000. This insurance will be written on a "claims-made" basis. Prior to executing the contract, the Consultant will provide a Certificate of Insurance to DOTD showing evidence of such professional liability insurance.

AUDIT - The selected Consultant will allow the DOTD Audit Section to perform an annual overhead audit of their books, or provide an *independent* Certified Public Accountant (CPA) audited overhead rate. This rate must be developed using Federal Acquisition Regulations (FAR) and guidelines provided by the DOTD Audit Section. In addition, the Consultant will submit semi-annual labor rate information, when requested by DOTD.

The selected Consultant will maintain, an approved Project Cost System and segregate direct from indirect cost in their General Ledger. Pre-award and post audits, as well as interim audits, may be required. For audit purposes, the selected Consultant will maintain accounting records for a minimum of five years after final contract payment.

Any Consultant currently under contract with the DOTD and who has not met all the audit requirements documented in the manual and/or notices posted on the DOTD Consultant Contract Services Website (www.dotd.louisiana.gov), will not be considered for this project.

SUBMITTAL REQUIREMENTS

One original (**stamped "original"**) and **five** copies of the SF 24-102 must be submitted to DOTD. All submittals must be in accordance with the requirements of this advertisement and the Consultant Contract Services Manual. Any Consultant/Team failing to submit any of the information required on the SF 24-102, or providing inaccurate information on the SF 24-102, will be considered non-responsive.

Any Sub-Consultants to be used, including Disadvantaged Business Enterprises (DBE), in performance of this Contract, must also submit a SF 24-102, which is completely filled out and contains all information pertinent to the work to be performed.

The Sub-Consultant's SF 24-102 must be firmly bound to the Consultant's SF 24-102. In Section 9, the Consultant's SF 24-102 must describe the **work elements** to be performed

by the Sub-Consultant(s), and state the approximate **percentage** of each work element to be subcontracted to each Sub-Consultant.

Name(s) of the Consultant/Team listed on the SF 24-102, must precisely match the name(s) filed with the Louisiana Secretary of State, Corporation Division, and the Louisiana State Board of Registration for Professional Engineers and Land Surveyors.

The SF 24-102 will be identified with **State Project No. 700-99-0542,** and will be submitted **prior to 3:00 p.m. CST** on **Monday, August 23, 2010**, by hand delivery or mail, addressed to:

Department of Transportation and Development
Attn.: Ms. Debra L. Guest, P.E.
Contracts Administrator
1201 Capitol Access Road, **Room 405-T**
Baton Rouge, LA 70802-4438 or
Telephone: (225) 379-1989

REVISIONS TO THE RFQ

DOTD reserves the right to revise any part of the RFQ by issuing an addendum to the RFQ at any time. Issuance of this RFQ in no way constitutes a commitment by DOTD to award a contract. DOTD reserves the right to accept or reject, in whole or part, all Qualification Statements submitted and/or cancel this announcement if it is determined to be in DOTD's best interest. All materials submitted in response to this announcement become the property of DOTD and selection or rejection of a submittal does not affect this right. DOTD also reserves the right, at its sole discretion, to waive administrative informalities contained in the RFQ.